In Merida there has been an increase in the number of cases, but no death has occurred from yellow fever since June 19.

There are 8 known cases in the town at present and the chances are that there is an equal number existing that are unknown.

Respectfully, S. H. HODGSON,
Acting Assistant Surgeon, U. S. M. H. S.

The SURGEON-GENERAL,
U. S. Marine-Hospital Service.

The cedron seed as a cure for yellow fever.

PROGRESO, MEXICO, *July 8, 1901.*

SIR: Having lived in a yellow-fever atmosphere for more than two years, and having seen the disease in all of its forms, I have necessarily conceived some views on the subject that might be of some benefit to the members of the Department that are thrown with that disease during the course of their duties at quarantine stations and in the tropics.

I want it distinctly understood that this is a theory in regard to the pathology of the disease, but an established fact as to the treatment.

I will not take up space in describing the etiology of the disease, for my knowledge in that direction does not occupy any space.

Drs. Reed, Carroll, and Agramonte have demonstrated, as far as I am concerned, the fact that yellow fever is propagated from individual to individual by means of the mosquito. Their experiments in Cuba also knocked out some well-established theories in regard to the transmittance of the disease by means of fomites, but I am sorry that their investigations did not include the bedbug (cimex) as a possible source of infection.

In the tropics the bedbug is all pervading, and his stealthy movements are more liable to accomplish the desired end than the buzzing mosquito.

As the cause of yellow fever is still in the speculative stage it is well to skip the numerous theories that have been advanced as to the etiology.

Looking at a well-marked case of yellow fever from a clinical standpoint, one is first impressed with the facial expression of the patient. This expression is as difficult to describe as it is to describe an odor, yet it is characteristic of the disease, and is diagnostic in many cases.

The headache, backache, and sore muscles, skin hot to the touch, temperature 38° to 40° C., and a history of chill and nausea, are the usually present symptoms during the first twenty-four hours of the disease. Sometimes nausea and vomiting are present from the beginning of the disease and last for several days, but an occasional case is met with where the stomach symptoms are absent.

The subsequent symptoms of the disease are albumin in the urine, slow pulse, congestion of the mucous membrames, bleeding from the gums, and may be black vomit.

All of these symptoms you are able to see or get from the patient, but there are several symptoms that are present that are not usually mentioned in the numerous works on yellow fever.

First there is a toxic infection affecting the center controlling the sympathetic nervous system, and also affecting the pneumogastric nerve. The vasomotor nervous system is also necessarily affected.

By keeping these facts in mind, the paralysis of the intestines, sluggish circulation, and nervous manifestations can all be accounted for.

By analyzing the symptoms, each can be attributed directly to the perverted nerve centers.

The nausea is entirely of a nervous origin, and is exactly like that of pregnancy. The headache, backache, and soreness of the muscles have their origin from the same source.

The action of the specific toxin upon the vasomotor system accounts for the congestion of the vessels of the mucosa of the entire body, and also for the changes in the liver and elimination of albumin.

The skin is the sheet anchor in the treatment of yellow fever, and it is the object of every yellow fever doctor to make it perform the work of the perverted and congested kidneys, but the usual remedies for producing diaphoresis prove absolutely inert in this disease.

The treatment of yellow fever has always been symptomatic, except in the few cases where antitoxins have been used, and I can find no instance recorded where the treatment has been directed solely to the nerve centers. Dr. Murray struck pretty near the solution of the problem when he used cocaine for the relief of vomiting. Acetanilid and caffein are useful on account of their influence on the nerve centers.

I have produced diaphoresis and diuresis with half grain hypodermics of morphine, when there was a suppression of urine and a hot dry skin.

When a patient dies from yellow fever, one of three things is the cause of death, uræmia, shock, or he "bleeds to death."

When I say that a yellow-fever patient bleeds to death I do not mean that the loss of blood through the congested and ruptured vessels of the stomach is the cause, but that the blood of the body is locked in a congested circulatory system, and has been drained by the kidneys of all desirable material, and there is practically no blood to sustain life.

Working on the hypothesis of the brain being the seat of the disease, at least the part affected by the unknown toxin, I have endeavored to find some one drug or remedy that would relieve the cerebral manifestations, and at the same time counteract the toxin that caused the disease.

Among the remedies used in Central and South America as an antidote for the stings of insects and the bites of snakes, the seed or bean of the cedron has been found to be a specific. A tincture is made from the grated or mashed seed and is also made into a fluid extract. I made a tincture from the beans and used it as an antidote for stings of insects and the bite of a snake, and found that the action was almost immediate and the relief complete.

The antitoxic properties of this remedy were so great that I thought that it might be of some benefit in yellow fever, and had an opportunity to try it in several cases of that disease, and from the results concluded that it is as specific for yellow fever as quinine is for malaria.

My experiments with the drug were under the most unfavorable circumstances. I was the government physician stationed at Jiminez, Costa Rica, at the time, and my patients were the native laborers on the nearby farms. Their surroundings were very unsanitary, and the only nurses available were uneducated, unclean, and, as a rule, ignorant. My tincture was homemade, not guaranteed to be antiseptic, and of very uncertain strength.

I kept no notes of the cases treated, and about the time that I realized that the remedy was valuable the epidemic played out, and there was no more material to experiment on. Every case that I treated with the

tincture recovered. It relieved the headache, stopped the nausea, and in the cases where it was injected early in the disease there was very little congestion.

I used the tincture by hypodermic injections of about 20 minims three times a day.

I have ordered some of the fluid extract from Parke, Davis & Co. and will endeavor to demonstrate its value by using it on some cases in Merida. Yellow fever and malaria are so similar that it is not reasonable to suppose that the remedies should be radically different. Quinine, a vegetable alkaloid, will cure malaria, and I believe that an alkaloid made from the Simaba cedron will cure yellow fever.

All of the recent investigators have worked along the line of serum therapeutics for a remedy for yellow fever, notwithstanding the fact that the specific bacillus that causes the disease is unknown. Quinine was known to be a specific for malaria some time before the advent of Lavaran, yet it will be some time before any serum will usurp its place with the doctors in the malarial districts, notwithstanding the fact that the plasmodium has been clearly demonstrated.

I think that this remedy is well worth investigating, and would be pleased to be placed in a position where its usefulness or uselessness can be clearly demonstrated. I have been unable to learn of its previous use in yellow fever cases, and if you have any such history, would be glad to have it.

I would like to get into some epidemic anywhere that I could give the drug a thorough trial, and would like to have someone thoroughly posted on the physiological action of drugs to make the observations. Merida might furnish a few cases for experimental purposes, but they would be in private houses. A Government hospital would be the better place and where the disease is epidemic.

In regard to the treatment of yellow fever, the hypodermic injections of quarts of a physiological saline solution is a life-saver where there is much congestion. A suppression of urine can be relieved in a few minutes by the injection of a quart of the solution, either hypodermically or intravenously. If a pint is injected twice a day there is no fear of collapse or black vomit. It will increase the amount of urine and diminish the albumin. After the third day of the disease it should be used regularly where there is more than 5 per cent of albumin in the urine. The hypodermic injections of the physiological solution can be alternated with enemas of the same solution at a lower temperature.

By this treatment you supply the blood that is lost by the congestion and keep a vital fluid flowing through the system.

But this treatment is symptomatic. What we want is something that will prevent the congestion, or relieve the condition that causes it.

I would like for you to call the attention of the men in yellow fever districts to the use of the physiological salt solution, more especially those men in Cuba, and have reports of cases so treated sent in to the department.

So much for my facts and theories in regard to the treatment of yellow fever, and I trust that you will send me some comments on them, for it has been all that I have accomplished during the past five years.

If you can not give me a commission to demonstrate the value of the fluid extract of cedron in the treatment of yellow fever in some port where it is epidemic, give me permission to visit Merida on account of

the Department, and provide for the necessary expenses, and I will try to get enough material here to prove its value one way or another.

* * * * * * *

Respectfully, S. H. HODGSON,
Acting Assistant Surgeon, U. S. M. H. S.

The SURGEON-GENERAL,
U. S. Marine-Hospital Service.

Inspection of vessels at Tampico, during the two weeks ended June 30, 1901.

TAMPICO, MEXICO, *July 7, 1901.*

SIR: I have the honor to submit the following report of vessels inspected during the two weeks ended June 30:

June 17, steamship *Chatton*, British; master, Sanderson; crew, 26; water ballast; for ports north of Hatteras via Cuban ports; steamship *Albis*, Norwegian; master, Langlie; crew, 20; cargo, cattle; for Havana, Cuba. June 20, steamship *Seneca*, American; master, Johnston; crew, 54; passengers, cabin 7, steerage 6; cargo, general and cattle; for New York via Havana; steamship *Nord*, Norwegian; master, Enger; crew, 20; passengers, cabin, 5; cargo, cattle; for Havana, Cuba. June 21, steamship *Aldborough*, British; master, Farraut; crew, 25; water ballast; for ports north of Hatteras via Cuban ports. June 22, steamship *Vittoria*, British; master, McKenzie; crew, 26; passengers, cabin, 1; cargo, general; for ports north of Hatteras via Vera Cruz; steamship *Newholm*, British; master, Voss; crew, 25; water ballast; for Pensacola, Fla. June 24, steamship *Bergen*, Norwegian; master, Hendricksen; crew, 21; cargo, cattle; for Havana, Cuba. June 27, steamship *Seguranca*, American; master, Leighton; crew, 60; passengers, cabin, 6; steerage, 7; cargo, general and cattle; for New York via Havana. June 28, steamship *Navigator*, British; master, Edgar; crew, 34; cargo, general; for New Orleans, La., via Progreso. June 30, steamship *Broadgarth*, British; master, Rowell; crew, 29; water ballast; for Baltimore, Md.

Respectfully, V. B. GREGORY,
Acting Assistant Surgeon, U. S. M. H. S.

The SURGEON-GENERAL,
U. S. Marine-Hospital Service.

PHILIPPINE ISLANDS.

Reports from Manila—Plague and smallpox for the three weeks ended June 15, 1901.

MANILA, P. I., *June 5, 1901.*

SIR: I have the honor to report that 27 cases of plague, with 24 deaths, occurred in Manila during the week ended June 1, 1901. Twenty-two Chinese and 5 Filipinos were affected.

During the same period there was reported 1 case of smallpox, with no deaths.

Respectfully, J. C. PERRY,
Passed Assistant Surgeon, U. S. M. H. S.,
Chief Quarantine Officer for the Philippine Islands.

The SURGEON-GENERAL,
U. S. Marine-Hospital Service.